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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Appellant: | Jeffrey J. Spiegelman | | |
| Application No.: | 09/661,617 | Group: | 1743 |
| Filed: | September 14, 2000 | Examiner: | Brian J. Sines |
| Confirmation No.: | 9556 | | |

For: METHOD OF IDENTIFYING FLUID PURIFICATION EQUIPMENT WHICH IS OPTIMIZED FOR INDIVIDUAL FLUID PURIFICATION SYSTEMS

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on _Nov. 17, 2006_ _Elaine Leahy_
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## AMENDED APPEAL BRIEF

Mail Stop Appeal Brief-Patents
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P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Amended Appeal Brief is submitted pursuant to the Notification of Non-Compliant Appeal Brief, mailed on Oct 23, 2006. Section V, Summary of Claimed Subject Matter, has been amended from the Appeal Brief, filed on May 26, 2006, and sections IX, Evidence Appendix, and X, Related Proceedings Appendix, have been added for compliance in accordance with the Notification of Non-Compliant Appeal Brief. This Amended Appeal Brief is otherwise substantially unchanged from the Appeal Brief, filed on May 26, 2006.

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## I.    REAL PARTY IN INTEREST

The real party in interest is Entegris, Inc., 3500 Lyman Boulevard, Chaska, Minnesota 55318.  On information and belief, Entegris, Inc. merged with Mykrolis Corporation, 129 Concord Road, Billerica, Massachusetts 01821-4600 by virtue of a merger document dated August 5, 2005.  Mykrolis Corporation is the Assignee of the entire right, title and interest in the subject application, by virtue of an Assignment from Aeronex, Inc. 6975 Flanders Drive, San Diego, California 92121 recorded on February 6, 2004 at Reel 014315, Frames 0337-0364.  On information and belief, Aeronex, Inc. was assigned the entire right, title and interest in the subject application by virtue of an Assignment from the sole inventor Jeffery J. Spiegelman of LaJolla, California, recorded September 14, 2000 at Reel 011094, Frames 0413-0416.

## II.    RELATED APPEALS AND INTERFERENCES

Appellants, the undersigned Attorney and Assignee are not aware of any related appeals, judicial proceedings or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III.　　STATUS OF CLAIMS

Claims 1 and 3-29 have been finally rejected, and a copy of the claims, with indication of their status, appears in the Appendix of this Brief. Claims 1, 28 and 29 were amended in the Amendment filed on October 28, 2005. Claim 3 appears as last amended. Claims 4-27 appear as originally filed. Claim 2 is canceled.

Claims 1 and 3-29 are being appealed.

## IV.   STATUS OF AMENDMENTS

An amendment was filed on October 28, 2005. However, the amendment did not persuade the Examiner that the application was in condition for allowance and the Final Office Action mailed from the U.S. Patent and Trademark Office on January 10, 2006 followed.

No amendments have been filed subsequent to the final rejection.

## V.    SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to a computer method (Claims 1, 3-17, 28, and 29) and apparatus (Claims 18-27) for automatically identifying to a user a fluid purification equipment package 100, 101, 102 in its entirety (a whole solution) optimized for the user's particular system (particular fluid purification system) based on a collection of the user's responses 1a, 2a, 2b, 3a....3d to a series of inquiries 1, 2A, 2B, 3A...3D.  The series of inquiries do not ask the user to choose particular pieces of equipment (solution components) from a list of options but rather obtains from the user the required fluid purification needs and use requirements (i.e., details about the particular fluid purification system in which the fluid purification equipment is to operate).  (Independent Claims 1, 28, and 29) (Specification page 3, lines 11-16 and page 4, lines 4-13.)

In particular, the series of inquiries elicit from the user the operating parameters and operating conditions under which the fluid purification takes place.  This collection of information is termed "a set or body of defining information" ("set" in Independent Claims 1 and 28, "body" in Independent Claim 29) regarding the overall targeted fluid purification system in which the subject fluid purification equipment package will be utilized and is optimized for use.  Specification page 5, lines 11-12 and 22-29.  For example, the inquiries ask the user to identify the specific gas which is to be purified, and then whether it is a corrosive or an inert gas.  Specification page 10, lines 3-8 and page 11, lines 6-9.

As shown in the application figure and described throughout the corresponding specification, an example embodiment:

(1)    receives user responses 1a, 2a, 3a  to a series of inquiries 1, 2A, 3A, the inquiries piecewise eliciting from the user a set of defining information regarding a particular host fluid purification system including operating parameters of the particular host system (Independent Claims 1, 28, and 29);

(2)    from the received user responses 1a, 2a, 3a across the whole series of inquiries 1, 2A, 3A (for example along path 14 in the application figure), forms the set of defining information regarding the particular host system (Independent Claims 1, 28, and 29); and

(3)    using the formed set of defining information of the particular host system, searches specifications of components (equipment) stored in a relational database 10, 20, 21 and

automatically identifies for a user one or more whole solutions, i.e., one (Independent Claims 1

and 28) or more (Independent Claim 29) fluid purification equipment packages each in its

entirety 100, 101, 102, each of which is optimal given the set of defining information of the

particular host system in which the solution package 100 (identified fluid purification equipment

packages 100, 101, 102) is to be operated.

Thus in the claimed invention, the user (1) through an interactive interface responds to a

series of questions regarding the host particular fluid purification system (a known, given system)

and not questions providing selection of component options and (2) is presented with a whole

solution (one or more "fluid purification equipment packages each in its entirety") without user

selection from and interaction with lists of individual solution components in the interactive

interface.   (Independent Claims 1, 28, and 29) (Specification page 3, lines 14-16; page 4, lines

14-18; and page 12, line 26 - page 13, line 6).

The independent Claims 1, 28, and 29 recite the foregoing as follows:

1.      A method for identifying fluid purification equipment which is optimized for use in a

particular fluid purification system, which comprises computer implemented steps of:

. . .

through an interactive interface, receiving user responses to a series of sequential

inquiries, said inquiries piecewise eliciting from a user a set of defining information

regarding said particular fluid purification system, . . .

from across the whole series of sequential inquiries, forming the set of

defining information from received user responses; and

using said formed set of defining information, searching specifications of said

database in a manner that automatically identifies for the user a fluid purification

equipment package in its entirety that is formed of a resultant set of one or more of the

plurality of fluid purification equipment components . . . to form fluid purification

equipment in a manner specific to said particular fluid purification system as set forth by

the set of defining information and operated to substantially satisfy the operating

parameters therein for optimized fluid purification, the automatic identification of the

fluid purification equipment package being performed in a manner free of user selection from and interaction with lists of individual components in the interactive interface.

28.  A method for identifying fluid purification equipment which is optimized for use in a particular fluid purification system, the method comprising the computer implemented steps of:

  . . .

  through an interactive interface receiving user responses to a series of sequential inquiries, said inquiries piecewise eliciting a set of defining information regarding said particular fluid purification system, . . .;

  from across the received user responses, obtaining the set of defining information;

  using said obtained set of defining information, accessing the database and automatically identifying for a user a fluid purification equipment package in its entirety, . . ., the resultant set of one or more identified components capable of being assembled to form fluid purification equipment in a manner specific to said particular fluid purification system according to the set of defining information and operated to substantially satisfy the operating parameters therein for optimized fluid purification, the automatic identification of the fluid purification equipment package being performed in a manner free of user selection from and interaction with lists of individual fluid purification equipment components in the interactive interface; and . . .

29.  A computer-implemented method for identifying fluid purification equipment which is optimized for use in a particular fluid purification system, which comprises:

  . . .

  through an interactive interface, providing a series of sequential inquiries to a user, . . . said series piecewise eliciting a body of defining information regarding said particular fluid purification system, the body of defining information including operating parameters of said particular fluid purification system;

. . .

using said formed body of defining information to retrieve specifications from the database and therefrom automatically identifying for a user one or more fluid purification equipment packages each in its entirety, . . . the resultant set of one or more identified components capable of being assembled to form fluid purification equipment in a manner specific to said particular fluid purification system as defined by the body of defining information and operated to substantially satisfy the operating parameters therein for optimized fluid purification, the automatic identification of the fluid purification equipment packages being performed in a manner free of user selection from and interaction with lists of individual fluid purification equipment components in the interactive interface.

## VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Final Office Action at hand is silent as to the claim terms "automatically identifies for the user a fluid purification equipment package in its entirety" of base Claims 1 and 28 and "automatically identifying for a user one or more fluid purification equipment packages each in its entirety" of base Claim 29. Thus, a first issue on review in this appeal is whether the Examiner can maintain a rejection under 35 U.S.C. § 103 having failed to address these claim limitations of the independent claims.

The Examiner confuses "a particular fluid purification system" and a "fluid purification equipment package". The former is the host system in which the latter is to be utilized. Thus a second issue on review in this appeal is whether the Examiner has properly addressed the base claim limitations of:

"from across the whole series of sequential inquiries, forming the set of defining information from received user responses..." (which is with respect to the particular fluid purification host system and not the solution fluid purification equipment package, see lines 2 and 7-8 of base Claim 1 in the attached Appendix);

"from across the received user responses, obtaining the set of defining information..." (which is with respect to the particular fluid purification host system and not the solution fluid purification equipment package, see lines 2 and 7-8 of base Claim 28 in the attached Appendix); and

"receiving user responses to the series of sequential inquiries and therefrom forming said body of defining information" (which is with regard to the particular fluid purification host system and not the solution fluid purification equipment package, see lines 2 and 9 of base Claim 29 in the attached Appendix).

VII.   ARGUMENT

    A.     <u>Whether Claims 1 and 3-28 are properly rejected under 35 U.S.C. § 103(a) as being obvious over Chang (U.S. Patent No. 5,873,263) in view of Hanson et al. (U.S. Patent No. 5,315,521) in further view of Beelitz et al. (U.S. Patent No. 6,182,275).</u>

Claims 1 and 3-28 stand rejected under 35 U.S.C. § 103(a) as being obvious over Chang U.S. Patent No. 5,873,263 (hereinafter "Chang") in view of Hanson et al. U.S. Patent No. 5,315,521 (hereinafter "Hanson") in further view of Beelitz et al. U.S. Patent No. 6,182,275 (hereinafter "Beelitz"). These claims stand or fall together.

    1.     <u>The rejection should be reversed because the Examiner failed to address each claim term of the claims.</u>

In an Amendment and Reply filed in the PTO on October 28, 2005, the Applicant

    (a) amended base Claim 1 to recite in pertinent part "...in a manner that automatically identifies for the user a fluid purification equipment package in its entirety..." and

    (b) amended base Claim 28 to recite in pertinent part "...automatically identifying for a user a fluid purification equipment package in its entirety".

The term "package" was added to supplement and make clear the term "in its entirety." Read as a whole, the claim limitation highlights that the present invention automatically identifies a whole solution for the user (Amendment filed October 28, 2005, Remarks page 9, paragraph 1 and page 10).

In the Final Action mailed from the PTO on January 10, 2006, the Examiner maintains rejections of Claims 1 and 3-29 under 35 U.S.C. § 103 as being obvious in view of earlier cited references but fails to address the "automatically identifies for the user a fluid purification equipment package in its entirety" claim limitation of base Claims 1 and 28. Pages 2-6 of the Final Office Action regarding Claims 1 and 28 are silent as to the claim limitation of "a fluid purification equipment package in its entirety".

Instead, the Examiner makes statements such as:

"Hence one of ordinary skill in the art would have recognized the suitability of applying the...method as disclosed by Beelitz et al., incorporating the use of relational databases and an interactive interface, for...configuring, building and selling a similarly customizable product, such as a fluid purification system, as taught by Chang." (Page 4 of Final Office Action)

"...a reasonable expectation of success in applying the methodology as taught by Beelitz et al. in the configuring and selling of a customizable fluid purification system..." (page 4, Final Office Action)

"...therefore it would have been obvious...to provide a method...wherein the method comprises the steps of: providing a relational database of equipment specifications regarding a plurality of equipment components from which a selection of individual components may be made;..." (page 5, Final Office Action)

"...providing access to the relational database through an interactive interface... comprising a series of sequential inquiries, wherein the response to each determines the next type of inquiry to be posed or a component to be specified..." (page 5 of Final Office Action)

"...and using the defining information to identify those equipment components specific to the particular fluid purification system selected..." (page 5, Final Office Action)

Thus the Examiner argues "selection of individual components" or "identification of equipment components" but not automated identification of "a fluid purification equipment package in its entirety" as claimed by the present invention.

These passages also demonstrate that the Examiner confuses the "particular fluid purification system" (which is the overall existing or predefined host system) and the "fluid purification equipment package" (which is the solution to be determined by the present invention

for optimal use in the host system). Contrary to the Examiner's arguments, the host system (i.e., "particular fluid purification system") is not being custom "configured" or "built" or purchased by the user of the present invention. It also is not "selected" by the user but rather is specified by the user as the given operating environment which limits or constrains the solution equipment package being determined.

On page 11 of the Final Office Action, the Examiner states "Regarding Beelitz *et al.*, the specification of, for example, the desired use of a processor speed would be inherently dependent on the type of CPU, which would necessitate a computer having the appropriate compatible RAM size and type (see col. 15, lines 46-65). The computer system does not necessarily have to be already existing, but in the process of being ordered by the user and configured." This further illustrates that the Examiner has not separated and hence has not properly addressed the claim terms of "the particular fluid purification system" (which is the existing or predefined host system) and the "fluid purification equipment package" (which is the solution to be determined for optimal use in the host system).

The preamble of each base claim recites the existence of a "particular fluid purification system". At least originally filed Specification page 3, lines 11-16; page 6, lines 6-29 and page 9, lines 6-13 support the above-argued interpretation that the "particular fluid purification system" is a predefined or user known host system in which the invention determined solution ("fluid purification equipment package") is to operate.

In the present invention, the user specifies the host "particular fluid purification system" in a piecewise manner through a series of inquiries. This is recited in base Claim 1 with the terms "...through an interactive interface, receiving user responses to a series of sequential inquiries...piecewise eliciting from a user a set of defining information regarding said particular fluid purification system,..." and "from across the whole series of sequential inquiries, forming the set of defining information from received user responses", and in base Claim 28 with the terms "...through an interactive interface receiving user responses to a series of sequential inquiries...piecewise eliciting from a user a set of defining information regarding said particular fluid purification system,...from across the received user responses, obtaining the set of defining information".

Nowhere does the Examiner set forth from the cited art a similar piecewise elicited set of defining information regarding an existing or predefined host system ("particular fluid purification system") in which the solution system is to operate. The following chart illustrates the marked distinction between (1) the present invention piecewise elicited set of defining information regarding the host system and (2) the cited reference Beelitz et al.'s piecewise user selection of solution components relied on by the Examiner to support the § 103 rejection of the present invention.

| | Beelitz System<br>("Solution Computer System" is computer being custom built/ordered) | Claimed Invention of Instant Application<br>("Fluid Purification Equipment Package" is solution being determined) |
|---|---|---|
| Step 1<br>Screen initially displays | First list of components for forming solution computer system<br><br>Col. 4, lines 40-49, and<br>Col. 7, lines 43-56 | First set of questions regarding operating parameters of overall environment (host fluid purification system) in which solution fluid purification equipment package is to operate. |
| Step 2<br>User inputs | Selection of one component (i.e., part) for solution computer system from displayed list (based on user's knowledge to determine one listed component is desirable over all other listed components).<br><br>Col. 4, lines 49-50, and<br>Col. 7, lines 57-60 | Answers to questions regarding operating parameters/environment of host system. NOT indicating any specific part/component of the solution fluid purification equipment package. |
| Step 3<br>System next displays | Second list of components as a function of user selected component in Step 2 (i.e., components, for solution computer system, that are compatible with user selected component) but not optimized for user's intended purpose/use of solution computer system. The sense of which listed components are optimum is in the user's thought process and not in Beelitz system logic in determining what subset of components to display in the second list.<br><br>Col. 4, lines 51-58;<br>Col. 6, lines 8-17 and 31-46; and<br>Col. 7, line 61 - Col. 8, line 3 | Second set of host system information gathering questions based on user's answers in Step 2. Second set of questions are NOT specific component selections for the solution fluid purification equipment package for the user to ponder or consider. |

| Step 4<br>User next inputs | Selection of one component for solution computer system from displayed second list,<br><br>.<br><br>.<br>etc.<br>.<br><br>repeat interactions of Steps 3, 4 with cumulative effect after each user selection made.<br><br>Col. 5, lines 6-12; and<br>Col. 8, lines 9-16 and 37-43. | Answers to questions displayed in Step 3. Not indicating any specific part/component of the solution fluid purification equipment package.<br><br>.<br><br>.<br>etc.<br>.<br><br>Iterations of Steps 3 and 4 (no user selected components for subject fluid purification equipment package made throughout these steps) |
| Step N<br><br>End result | Tally of user selected components as guided by Beelitz system compatibility-wise but based on user's judgment and knowledge on applicability for intended use.<br><br>Col. 4, line 63 - Col. 5, line 3;<br>Col. 5, lines 9-12;<br>Col. 8, lines 37-43; and<br>Col. 9, lines 32-40 | Identification (display) of one or more fluid purification equipment packages automatically determined, each in total, by the invention system and each of optimized use in host fluid purification system, the host fluid purification system having been piecewise described by the user in answering questions in prior steps. |

Therefore, the interactive user interface of Beelitz et al. "configuring, building and selling a customizable computer system" cited on page 4 of the Final Office Action does not address (1) the claimed "series of...inquiries piecewise eliciting from a user a set of defining information regarding said (given host) particular fluid purification system" (annotation added) in which the solution "fluid purification equipment package" is to operate, or (2) the claimed "from across the whole series of sequential inquiries, forming the set of defining information from received user responses."

Further, it is this set of defining information regarding the given host system that is used to search specifications of fluid purification equipment components (candidate solution components) in a manner that automatically identifies for the user a fluid purification equipment package in its entirety (i.e., a whole solution) in the present invention. This is recited in Base Claims 1 and 28 as:

"providing a relational database of specifications regarding a plurality of fluid purification equipment components;...

...using said formed set of defining information, searching specifications of said database in a manner that automatically identifies for the user the fluid purification equipment package in its entirety..." (Claim 1)

"providing a relational database of specifications regarding a plurality of fluid purification equipment components;...

...using said obtained set of defining information, accessing the database and automatically identifying for a user a fluid purification equipment package in its entirety..." (Claim 28)

As argued above, the Examiner does not address the formed or obtained "set of defining information" regarding a host system and thus in turn does not address the claimed use of this defining information to access or search a database of candidate solution component specifications in a manner that automatically identifies for a user "a fluid purification equipment package in its entirety" (i.e., a whole solution).

Accordingly, the Examiner has failed to address the base Claims 1 and 28 terms of:

"automatically identifies for the user a fluid purification equipment package in its entirety"

"series of sequential inquiries...piecewise eliciting from a user a set of defining information regarding said particular fluid purification system"

"from across the whole series of sequential inquiries, forming the set of defining information from received user responses;...

using said formed set of defining information, searching specifications of said database in a manner that automatically identifies for the user a fluid purification equipment package in its entirety..." and

"from across the received user responses, obtaining the set of defining information;

using said obtained set of defining information, accessing the database and automatically identifying for a user a fluid purification package in its entirety."

As such, the Examiner has failed to properly address each claim term of Claims 1 and 3-28 where Claims 3-27 depend from Claim 1. Therefore, the § 103 rejection of these claims should be withdrawn.

 2. The rejection should be reversed because the component by component determination of a solution in the combined teachings of the cited references is not suggestive of the automatic identification of a whole solution approach of the claimed invention.

 The Final Office Action sets forth that Chang discloses a fluid purification system but that "Chang does not specifically teach the optimization of the...system." The Final Office Action thus cites Hanson et al. as evidencing "...the optimization of fluid purification systems through process equipment selection and operation..." (Final Office Action page 2). The Final Office Action goes on to state that "...Chang does not specifically teach a computer-implemented method for identifying fluid purification equipment..." but cites Beelitz as a reference that "...relates effectively to the same problem and solution as that addressed by the claimed invention." (Final Office Action pages 3-4).

 Beelitz discloses a piecewise component by component user selection methodology in which a user selects individual solution components from respective pick lists. Each subsequent list displays only component options that are compatible with prior selected components. (Beelitz, col. 2, line 20 - col. 3, line 28; col. 4, lines 40-67 and Abstract).

 The method of Beelitz of displaying different lists of options (sets of questions) to a user to determine one component at a time for a custom built system/solution is not suggestive of the present invention method in which automatic identification of an optimized whole solution (i.e., "fluid purification equipment package in its entirety") is made from the total collection of user responses regarding the host system in which the solution system is to operate. The pertinent claim language reads: "from across the whole series of sequential inquiries, forming the set of defining information...using said formed set of defining information, searching specifications...in a manner that automatically identifies for the user a fluid purification equipment package in its entirety..." (base Claim 1); and "from across the received user responses, obtaining the set of

defining information; using said obtained set of defining information, accessing the database and automatically identifying for a user a fluid purification equipment package in its entirety..." (Base Claim 28). Claims 3-27 depend from Claim 1 and thus inherit the above claim limitations. One of ordinary skill in the art would not be motivated to modify the individual component by component determination of the solution approach of Beelitz to the whole solution (based on the total of user responses regarding the host environment/system) method of the present invention given the prior and cited art, where Chang merely discloses a fluid purification system and Hanson et al. as stated by the Examiner (Final Office Action, page 2) stands for optimization of fluid purification systems through equipment selection and operation (which is akin to a one component at a time approach). Any combination of Beelitz, Chang and Hanson would only result in a component by component determination of the solution approach and not the automated identification for the user of the whole solution ("fluid purification equipment package in its entirety") approach of the present invention.

As such, the present invention is not implied or suggested by any combination of Beelitz, Chang and Hanson. Thus, no combination of the cited art makes obvious the present invention as claimed in Claims 1 and 3-28, and the § 103 rejection of these claims should be withdrawn.

B.  Whether Claim 29 is properly rejected under 35 U.S.C. § 103(a) as being obvious over Chang ('263) in view of Hanson et al. ('521) in further view of Beelitz et al. ('275).

Claim 29 stands rejected under 35 U.S.C. § 103(a) as being obvious over Chang in view of Hanson et al. in further view of Beelitz et al. This claim stands or falls on its own.

1.  The rejection should be reversed because the Examiner failed to address each claim term of the claim.

In the amendment and reply filed in the Patent Office on October 28, 2005, the Applicant amended base Claim 29 to recite in pertinent part "...using said formed body of identifying

information to retrieve specifications from the database and therefrom automatically identifying for a user one or more fluid purification equipment packages each in its entirety..."

In the Final Office Action, the Examiner maintains the rejections of Claims 1 and 3-29 under 35 U.S.C. § 103(a) as being obvious in view of earlier cited references but fails to address the "automatically identifying for a user one or more fluid purification equipment packages each in its entirety" claim limitation of base Claim 29. Pages 2-6 of the final Office Action regarding Claim 29 are silent as to the claim limitation of "one or more fluid purification equipment packages each in its entirety".

Instead, the Examiner makes statements such as:

"Hence one of ordinary skill in the art would have recognized the suitability of applying the...method as disclosed by Beelitz et al., incorporating the use of relational databases and an interactive interface, for...configuring, building and selling a similarly customizable product, such as a fluid purification system, as taught by Chang." (Page 4 of Final Office Action)

"...a reasonable expectation of success in applying the methodology as taught by Beelitz et al. in the configuring and selling of a customizable fluid purification system..." (page 4, Final Office Action).

"...therefore it would have been obvious...to provide a method...wherein the method comprises the steps of: providing a relational database of equipment specifications regarding a plurality of equipment components from which a selection of individual components may be made;..." (page 5, Final Office Action)

"...providing access to the relational database through an interactive interface... comprising a series of sequential inquiries, wherein the response to each determines the next type of inquiry to be posed or a component to be specified..." (page 5 of Final Office Action)

"...and using the defining information to identify those equipment components specific to the particular fluid purification system selected..." (page 5, Final Office Action).

Thus the Examiner argues "selection of individual components" or "identification of equipment components" but not automated identification of "one or more fluid purification equipment packages each in its entirety" as claimed by the present invention of Claim 29.

These passages also demonstrate that the Examiner confuses the "particular fluid purification system" (which is the overall existing or predefined host system) and the "fluid purification equipment packages" (which are the solution equipment packages being determined by the present invention for optimal use in the host system). Contrary to the Examiner's arguments, the host system (i.e., "particular fluid purification system") is not being custom "configured" or "built" or purchased by the user of the present invention. It also is not "selected" by the user but rather is specified by the user as the given operating environment which limits or constrains the solution equipment packages being determined.

On page 11 of the Final Office Action, the Examiner states "Regarding Beelitz *et al.*, the specification of, for example, the desired use of a processor speed would be inherently dependent on the type of CPU, which would necessitate a computer having the appropriate compatible RAM size and type (see col. 15, lines 46-65). The computer system does not necessarily have to be already existing, but in the process of being ordered by the user and configured." This further illustrates that the Examiner has not separated and hence has not properly addressed the claim terms of "the particular fluid purification system" (which is the existing or predefined host system) and the "fluid purification equipment package" (which is the solution to be determined for optimal use in the host system).

The preamble of base claim 29 recites the existence of "a particular fluid purification system". At least originally filed Specification page 3, lines 11-16; page 6, lines 6-29 and page 9, lines 6-13 support the above-argued interpretation that the "particular fluid purification system" is a predefined or user known host system in which the invention determined solution ("fluid purification equipment package") is to operate.

In the present invention, the user specifies the host "particular fluid purification system" in a piecewise manner through a series of inquiries. This is recited in base Claim 29 with the terms "...through an interactive interface, providing a series of sequential inquiries to a user...said series piecewise eliciting a body of defining information regarding said particular fluid purification system,..." and "...receiving user responses to the series of sequential inquiries and therefrom forming said body of defining information..."

Nowhere does the Examiner set forth from the cited art a similar piecewise elicited body of defining information regarding an existing or predefined host system in which the solution systems are to operate. The foregoing chart illustrates the marked distinction between (1) the present invention piecewise elicited body of defining information regarding the host system and (2) the cited reference Beelitz et al.'s piecewise user selection of solution components relied on by the Examiner to support the § 103 rejection of Claim 29 of the present invention.

Therefore, the interactive user interface of Beelitz et al. "configuring, building and selling a customizable computer system" cited on page 4 of the final Office Action does not address (1) the claimed "series of...inquiries... piecewise eliciting a body of defining information regarding said (given host) particular fluid purification system" (annotation added) in which the solution "one or more fluid purification equipment packages" are to operate, or (2) the claimed "receiving user responses to the series of sequential inquiries and therefrom forming said body of defining information".

Further, it is this body of defining information regarding the given host system that is used to retrieve specifications of fluid purification equipment components (candidate solution components) in a manner that automatically identifies for the user one or more fluid purification equipment packages each in its entirety (i.e., whole solutions) in the present invention. This is recited in Base Claim 29 as

"providing a relational database of specifications regarding a plurality of fluid purification equipment components;...

using said formed body of defining information to retrieve specifications from the database and therefrom automatically identifying for a user one or more fluid purification equipment packages each in its entirety..."

As argued above, the Examiner does not address the "formed body of defining information" and thus in turn does not address the claimed use of this defining information to access or search a database of component specifications in a manner that automatically identifies for a user "one or more fluid purification equipment packages each in its entirety" (i.e., whole solutions). In fact, the ability of the cited references to produce more than one solution for the user is not raised by the Examiner.

Accordingly, the Examiner has failed to address base Claim 29 terms of:

"automatically identifying for a user one or more fluid purification equipment packages each in its entirety,..."

"series of sequential inquiries..., said series piecewise eliciting a body of defining information regarding said particular fluid purification system,..."

"receiving user responses to the series...and therefrom forming said body of defining information..."

As such, the Examiner has failed to properly address each claim term of base Claim 29. The § 103 rejection of this claim should be withdrawn.

> 2. <u>The rejection should be reversed because the component by component determination of a single solution in the combined teachings of the cited references is not suggestive of the automatic identification of multiple whole solutions approach of the claimed invention.</u>

The Final Office Action sets forth that Chang discloses a fluid purification system but that "Chang does not specifically teach the optimization of the...system." The Final Office Action thus cites Hanson et al. as evidencing "...the optimization of fluid purification systems through process equipment selection and operation..." (Final Office Action page 2). The Final Office Action goes on to state that "...Chang does not specifically teach a computer-implemented method for identifying fluid purification equipment..." but cites Beelitz as a reference that "...relates effectively to the same problem and solution as that addressed by the claimed invention." (Final Office Action pages 3-4).

Beelitz discloses a piecewise component by component user selection methodology in which a user selects individual components of a single solution from a series of pick lists. Each subsequent list displays only component options that are compatible with prior selected components. (Beelitz, col. 2, line 20 - col. 3, line 28; col. 4, lines 40-67 and Abstract).

The method of Beelitz of displaying different lists of options (sets of questions) to a user to determine one component at a time for a custom built system/solution is not suggestive of the present invention method in which automatic identification of optimized whole solutions (i.e., "one or more fluid purification equipment packages each in its entirety") is made from the total collection of user responses regarding the host system in which the solutions are to operate. The pertinent claim language reads: "...receiving user responses to the series of sequential inquiries and therefrom forming said body of defining information; and

using said formed body of defining information to retrieve specifications...and therefrom automatically identifying for a user one or more fluid purification equipment packages each in its entirety,..."

One of ordinary skill would not be motivated to modify the individual component by component determination of the solution approach of Beelitz to the whole solutions (based on the total of user responses regarding the host system) approach of the present invention given the cited art, where Chang merely discloses a fluid purification system and Hanson et al. stands for optimization of fluid purification systems through equipment selection and operation (which is akin to a one component at a time approach). Any combination of Beelitz, Chang and Hanson would only result in a component by component determination of the solution approach and not the automated identification for the user of whole solutions ("one or more fluid purification equipment packages each in its entirety") approach of the present invention.

As such, the present invention is not implied or suggested by any combination of Beelitz, Chang and Hanson. Thus, no combination of the cited art makes obvious the present invention as claimed in Claim 29, and the § 103 rejection of Claim 29 should be withdrawn.

## CONCLUSION

Applicant and Applicant's attorney respectfully submit that all claims pending in the application (Claims 1 and 3-29) are in condition for allowance. The grounds for rejection are not properly met and should be withdrawn. Allowance is respectfully requested such that the application may pass to issue.

Respectfully submitted,

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VIII.    CLAIMS APPENDIX

1.       (Currently amended)  A method for identifying fluid purification equipment which is

optimized for use in a particular fluid purification system, which comprises computer

implemented steps of:

        providing a relational database of specifications regarding a plurality of fluid

purification equipment components;

        through an interactive interface, receiving user responses to a series of sequential

inquiries, said inquiries piecewise eliciting from a user a set of defining information

regarding said particular fluid purification system, each subsequent inquiry in the series

being dependent on user responses to previous inquiries in the series, the set of defining

information including operating parameters of said particular fluid purification system;

        from across the whole series of sequential inquiries, forming the set of

defining information from received user responses; and

        using said formed set of defining information, searching specifications of said

database in a manner that automatically identifies for the user a fluid purification

equipment package in its entirety that is formed of a resultant set of one or more of the

plurality of fluid purification equipment components from the specifications in the

database, the resultant set of one or more identified components capable of being

assembled to form fluid purification equipment in a manner specific to said particular

fluid purification system as set forth by the set of defining information and operated to

substantially satisfy the operating parameters therein for optimized fluid purification, the

automatic identification of the fluid purification equipment package being performed in a

manner free of user selection from and interaction with lists of individual components in the interactive interface.

2.      (Canceled)

3.      (Previously presented) A method as in Claim 1 further comprising at least one of said operating parameters being selected from the group consisting of fluid type, fluid flow rate, inlet fluid contaminant challenge, outlet fluid purity, duty cycle, life span between service, fluid temperature, fluid pressure, cost and connections to upstream and downstream portions of said particular fluid purification system.

4.      (Original) A method as in Claim 1 wherein said database comprises a plurality of subdatabases, each subdatabase comprising selection information regarding at least one property of at least one said component of said fluid purification equipment.

5.      (Original) A method as in Claim 4 wherein a series of said responses to inquiries through said interface causes said operating system to compile a series of component selections from said plurality of subdatabases, which components will, when assembled, form said fluid purification equipment which can be operated so as to optimize fluid purification in said particular fluid purification system.

6.      (Original) A method as in Claim 5 further comprising causing said subdatabases to be addressed sequentially, a sequence of addressing being determined at each step in said sequence by said response elicited in an immediately prior step.

7.      (Original) A method as in Claim 5 wherein compilation of said series of component selections further causes said operating system to generate a subsequent series of inquiries regarding choice of equipment ancillary to said fluid purification system.

8.      (Original) A method as in Claim 7 wherein said equipment ancillary to said fluid purification system comprises fluid flow, process control and instrumentation equipment.

9.      (Original) A method as in Claim 4 wherein said selection information of at least one of said subdatabases comprises data for evaluating from said responses whether a defined component currently is available in the marketplace and if not what design and manufacture costs of said defined component would be.

10.     (Original) A method as in Claim 4 wherein said selection information of at least one of said subdatabases comprises data for evaluating from said responses whether combinations of defined components are operationally compatible and presenting a notification thereof.

11.    (Original) A method as in Claim 10 further comprising said notification including suggesting options for alternative compatible combinations.

12.    (Original) A method as in Claim 1 further comprising said using said defining information to identify a plurality of combinations of said components, wherein each combination of said plurality can be assembled to form said fluid purification equipment in a manner specific to said particular fluid purification system and can be operated so as to optimize fluid purification in said particular fluid purification system.

13.    (Original) A method as in Claim 12 wherein said combinations of said components differ from each other with respect to technical and economic parameters, and said method further comprises generating a further inquiry response to which indicates selection among said combinations of a specific combination of said technical and economic parameters most suitable for obtaining optimized fluid purification in said particular fluid purification system.

14.    (Original) A method as in Claim 1 wherein said fluid comprises a liquid, a gas or a mixture thereof.

15.    (Original) A method as in Claim 14 wherein purification of said liquid, gas or mixture comprises removal of contaminants to a level in a parts per million or parts per billion range.

16.    (Original)  A method as in Claim 14 wherein purification of said liquid, gas or mixture

comprises absorption, separation or filtration.


17.    (Original)  A method as in Claim 1 further comprising gaining access to said relational

database by means of a computer or through a global computer network.


18.    (Original)  Apparatus comprising electronic media comprising embodiment of the method

of Claim 1 in a form accessible for interactive use.


19.    (Original)  Apparatus as in Claim 18 further comprising said embodiment comprising a

relational database and operational software therefor.


20.    (Original)  Apparatus as in Claim 19 wherein said relational database comprises a

plurality of subdatabases, each subdatabase comprising selection information regarding at

least one property of at least one said component of said fluid purification equipment.


21.    (Original)  Apparatus as in Claim 20 wherein said selection information of at least one of

said subdatabases comprises data for evaluating from said responses whether

combinations of defined components are operationally incompatible and presenting a

notification thereof.

22.     (Original) Apparatus as in Claim 19 further comprising accessability to said relational database and operational software therefor being by means of a computer.

23.     (Original) Apparatus as in Claim 22 where said relational database and operational software therefore are maintained on and accessible from said interactive storage media disposed within said computer.

24.     (Original) Apparatus as in Claim 23 wherein said interactive storage media comprises a memory hard drive, a CD-ROM or a DVD-ROM.

25.     (Original) Apparatus as in Claim 22 wherein said computer comprises a desktop computer, a laptop computer or an Internet-access-specific computer.

26.     (Original) Apparatus as in Claim 18 wherein said electronic media comprises a global computer network.

27.     (Original) Apparatus as in Claim 26 further comprising said embodiment comprising a relational database and operational software therefore, with accessability thereto being through an Internet Web site on said global computer network.

28.     (Currently amended)  A method for identifying fluid purification equipment which is

optimized for use in a particular fluid purification system, the method comprising the

computer implemented steps of:

providing a relational database of specifications regarding a plurality of fluid

purification equipment components;

through an interactive interface receiving user responses to a series of sequential

inquiries, said inquiries piecewise eliciting a set of defining information regarding said

particular fluid purification system, each subsequent inquiry in the series being dependent

on user responses to previous inquiries in the series, the set of defining information

including operating parameters of said particular fluid purification system;

from across the received user responses, obtaining the set of defining

information;

using said obtained set of defining information, accessing the database and

automatically identifying for a user a fluid purification equipment package in its

entirety, said fluid purification equipment package being formed of a resultant set of one

or more of the plurality of fluid purification equipment components from the

specifications in the database, the resultant set of one or more identified components

capable of being assembled to form fluid purification equipment in a manner specific to

said particular fluid purification system according to the set of defining information and

operated to substantially satisfy the operating parameters therein for optimized fluid

purification, the automatic identification of the fluid purification equipment package

being performed in a manner free of user selection from and interaction with lists of

individual fluid purification equipment components in the interactive interface; and

    providing an option to purchase said automatically identified fluid purification

equipment package.


29.    (Currently amended)  A computer-implemented method for identifying fluid purification

equipment which is optimized for use in a particular fluid purification system, which

comprises:

    providing a relational database of specifications regarding a plurality of fluid

purification equipment components;

    through an interactive interface, providing a series of sequential inquiries

to a user, each subsequent inquiry in the series being dependent on user

responses to previous inquiries in the series, said series piecewise eliciting a

body of defining information regarding said particular fluid purification system,

the body of defining information including operating parameters of said

particular fluid purification system;

    receiving user responses to the series of sequential inquiries and therefrom

forming said body of defining information; and

    using said formed body of defining information to retrieve specifications from the

database and therefrom automatically identifying for a user one or more fluid purification

equipment packages each in its entirety, each identified fluid purification equipment

package being formed of a respective resultant set of one or more of the plurality of fluid

purification equipment components from the specifications in the database, the resultant set of one or more identified components capable of being assembled to form fluid purification equipment in a manner specific to said particular fluid purification system as defined by the body of defining information and operated to substantially satisfy the operating parameters therein for optimized fluid purification, the automatic identification of the fluid purification equipment packages being performed in a manner free of user selection from and interaction with lists of individual fluid purification equipment components in the interactive interface.

IX.     <u>EVIDENCE APPENDIX</u>

None.

X.     <u>RELATED PROCEEDINGS APPENDIX</u>

None.